

Application No. 09/917,576  
Amendment Dated May 27, 2004  
Reply to Office Action of May 7, 2004

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.  
Please amend Claims 1, 7, and 17 as follows:

1. (Currently Amended) An interactive voice response system for a telecommunications system, comprising:  
an adjunct processor that outputs an output data stream to a user; and  
a speech gateway enabling system comprising:  
5        a speech recognition engine operable to identify words in an input voice stream received from the user on a first communication path extending between the user and the speech gateway enabling system and  
10        a speech gateway controller operable (a) to transfer at least a portion of the input voice stream, received from the user, from the first communication path to a second communication path extending between the speech gateway enabling system to the adjunct processor and (b) to transfer the at least a portion of the input voice stream received from the user from the first communication path to the speech recognition engine for processing. VM
2. (Previously Presented) The interactive voice response system of Claim 1, wherein the speech gateway enabling system comprises a speech digitizer that converts the input voice stream from analog to digital form and the first and second communication paths are tromboned together.
3. (Previously Presented) The interactive voice response system of Claim 1, wherein the first and second communication paths are configured by a switching system and the speech gateway controller is further operable to generate and transmit a command signal to the adjunct processor based on words identified by the speech recognition engine.

*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

4. (Previously Presented) The interactive voice response system of Claim 3, wherein the command signal is a DTMF code and the speech enabling gateway system comprises grammar correlating a plurality of words with a corresponding plurality of DTMF codes in the command set of the adjunct processor.

5 5. (Previously Presented) The interactive voice response system of Claim 3, wherein the switching system comprises a plurality of communication ports and the first communication path extends between first and second communication ports of the switching system and the second communication path extends between different third and fourth communication ports of the switching system.

5 6. (Previously Presented) The interactive voice response system of Claim 1, wherein the speech gateway controller performs operation (b) in a first operational mode and wherein the speech enabling gateway controller is also operable (c) to transfer at least a portion of the output data stream from the second communication path to the first communication path and (d), in a second operational mode, to transfer the at least a portion of the output data stream from the second communication path to the speech recognition engine for processing.

7. (Currently Amended) A method of providing interactive voice response capability in a telecommunications system, comprising:

5 (a) directing to a speech recognition engine at least a portion of an input voice stream received from a user on a first communication path extending between the user and a first adjunct processor;

(b) detecting, with the speech recognition engine, at least some of the words in the at least a portion of the input voice stream;

*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

10 (c) transferring the input voice stream received from the user the first communication path to a second communication path extending between the first adjunct processor and a second adjunct processor;

(d) comparing at least some of the detected words with a grammar, the grammar correlating a plurality of words with a corresponding plurality of command codes, to identify corresponding command codes for each of the at least some of the detected words; and

15 (e) transmitting a command signal corresponding to at least one identified command code to the second adjunct processor on the second communication path.

8. (Original) The method of Claim 7, wherein the directing and transferring steps occur at least substantially simultaneously.

9. (Original) The method of Claim 7, wherein the grammar further includes at least one switch symbol for at least one of enabling and disabling the directing step (a).

10. (Original) The method of Claim 7, further comprising:

(f) converting the input voice stream from an analog form to a digital form.

11. (Original) The method of Claim 7, further comprising:

(f) configuring the first communication path for a first communication session initiated by the user with the first adjunct processor; and

5 (g) thereafter configuring the second communication path for a second communication session, initiated by the first adjunct processor, between the first and second adjunct processors.

*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

12. (Previously Presented) The method of Claim 7, further comprising:

(f) transferring an output data stream from the second communication path to the first communication path, the output data stream being received from the second adjunct processor.

13. (Previously Presented) The method of Claim 12, wherein transferring steps(c) and (f) occur at least substantially simultaneously.

14. (Previously Presented) The method of Claim 7, further comprising:

(f) muting the first communication path when the transmitting step (e) is performed.

15. (Original) The method of Claim 7, further comprising:

(f) determining if the output from the speech recognition engine includes a switch symbol; and

5 (g) when the output includes a switch symbol, at least one of enabling or disabling the directing step (a).

16. (Original) The method of Claim 7, further comprising:

(f) determining if one of the first and second communication paths has been disconnected; and

5 (g) when one of the first and second communication paths has been disconnected, disconnecting the other of the first and second communication paths.

17. (Currently Amended) A system of providing interactive voice response capability in a telecommunications system, comprising:

first and second adjunct processors;

Application No. 09/917,576  
Amendment Dated May 27, 2004  
Reply to Office Action of May 7, 2004

5 a speech recognition engine that detects at least some words in an input voice stream received from a user on a first communication path extending between the user and the first adjunct processor;

comparing means for comparing at least some of the detected words with a grammar, the grammar correlating a plurality of words with a corresponding plurality of DTMF codes, to identify corresponding DTMF codes for each of the at least some of the detected words;

10 directing means for directing to the speech recognition engine at least a portion of the input voice stream received from the user on the first communication path;

transferring means for transferring the at least a portion of the input voice stream received from the ~~[[user]]~~ first communication path to a second communication path extending between the first adjunct processor and the second adjunct processor; and

15 transmitting means for transmitting a DTMF signal corresponding to at least one identified DTMF code on ~~[[a]]~~ the second communication path ~~extending between the first adjunct processor and the second adjunct processor.~~

18. (Original) The system of Claim 17, wherein the grammar further includes at least one switch symbol for at least one of enabling and disabling the directing means.

19. (Original) The system of Claim 17, further comprising:

converting means for converting the input voice stream from an analog form to a digital form.

20. (Original) The system of Claim 17, further comprising:

5 configuring means for configuring the first communication path for a first communication session initiated by the user with the first adjunct processor and thereafter configuring the second communication path for a second communication session, initiated by the first adjunct processor, between the first and second adjunct processors.

*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

21. (Original) The system of Claim 17, further comprising:  
transferring means for transferring an output data stream from the second  
communication path to the first communication path.

22. (Original) The system of Claim 17, further comprising:  
muting means for muting the first communication path when the transmitting means  
transmits DTMF signals.

23. (Original) The system of Claim 17, further comprising:  
determining means for determining if the output from the speech recognition engine  
includes a switch symbol; and  
when the output includes a switch symbol, means for at least one of enabling or  
5 disabling the directing means.

24. (Original) The system of Claim 17, further comprising:  
means for determining if one of the first and second communication paths has been  
disconnected; and  
when one of the first and second communication paths has been disconnected, means  
5 for disconnecting the other of the first and second communication paths.

25. (Previously Presented) The interactive voice response system of Claim 6,  
wherein the first operational mode is performed in response to a command signal from the  
user and the second operational mode is performed in response to a command signal from  
the adjunct processor.

*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

26. (Previously Presented) The interactive voice response system of Claim 3, wherein the speech gateway controller is operable to place the user on hold while the command codes are transmitted to the adjunct processor.

27. (Previously Presented) The method of Claim 7, wherein the plurality of command codes are DTMF codes and the command signal is a DTMF signal.

28. (Previously Presented) The method of Claim 12, further comprising:

(g) directing to the speech recognition engine at least a portion of the output data stream received from the second adjunct processor on the second communication path extending between the first and second adjunct processors;

5 (h) determining when the output data stream includes a switch symbol;

(i) when the output data stream includes a switch symbol, directing step (g) is performed and, when the input voice stream includes a switch symbol, directing step (a) is performed.

29. (Previously Presented) A method of providing interactive voice response capability in a telecommunications system, comprising:

(a) directing to a speech recognition engine at least a portion of an output data stream received from a second adjunct processor on a second communication path extending  
5 between the second adjunct processor and a first adjunct processor;

(b) detecting, with the speech recognition engine, at least some of the words in the at least a portion of the output data stream received from the second adjunct processor;

(c) transferring the at least a portion of an output data stream received from the second adjunct processor to a first communication path extending between the user and the  
10 first adjunct processor;

*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

(d) comparing at least some of the detected words with at least one command signal; and

(e) when the output data stream includes a command signal, terminating the directing step.

30. (Previously Presented) The method of Claim 29, further comprising:

(f) directing to the speech recognition engine at least a portion of an input voice stream received from a user on the first communication path extending;

5 (g) detecting, with the speech recognition engine, at least some of the words in the at least a portion of the input voice stream;

(h) transferring the input voice stream to the second communication path ;

(i) comparing at least some of the detected words with a grammar, the grammar correlating a plurality of words with a corresponding plurality of command codes, to identify corresponding command codes for each of the at least some of the detected words; and

10 (j) transmitting a command signal corresponding to at least one identified command code on the second communication path.

31. (Previously Presented) The method of Claim 29, wherein the directing and transferring steps occur at least substantially simultaneously.

32. (Previously Presented) The method of Claim 30, wherein the grammar further includes at least one switch symbol for at least one of enabling and disabling the directing steps (a) and (f).

33. (Previously Presented) The method of Claim 30, further comprising:

(k) converting the input voice stream from an analog form to a digital form.



*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

34. (Previously Presented) The method of Claim 30, further comprising:  
(k) configuring the first communication path for a first communication session initiated by the user with the first adjunct processor; and  
(l) thereafter configuring the second communication path for a second communication session, initiated by the first adjunct processor, between the first and second adjunct processors.
35. (Previously Presented) The method of Claim 29, wherein transferring step (c) and the directing step (a) occur at least substantially simultaneously.
36. (Previously Presented) The method of Claim 30, wherein the directing steps (a) and (f) occur at different times and the transferring steps (c) and (h) occur at least substantially simultaneously.
37. (Previously Presented) The method of Claim 30, further comprising:  
(f) muting the first communication path when the transmitting step (j) is performed.
38. (Previously Presented) The method of Claim 30, further comprising:  
(k) determining when the at least a portion of the input voice stream includes a switch symbol; and  
(l) when the at least a portion of the input voice stream includes a switch symbol, at least one of enabling or disabling the directing step (f).
39. (Previously Presented) The method of Claim 30, further comprising:  
(f) determining when one of the first and second communication paths has been disconnected; and

*Application No. 09/917,576*  
*Amendment Dated May 27, 2004*  
*Reply to Office Action of May 7, 2004*

5 (g) when one of the first and second communication paths has been disconnected,  
disconnecting the other of the first and second communication paths.

40. (Previously Presented) The method of Claim 28, wherein the directing steps (a) and (g) occur at different times and the transferring steps (c) and (f) occur at least substantially simultaneously.

41. (Previously Presented) The system of Claim 17, wherein the directing and transferring operations occur simultaneously.

42. (Previously Presented) The method of Claim 30, wherein directing step (f) and transferring step (h) occur simultaneously.